

Swinging into Trouble: A Case of Acute Spinal Cord Injury Following Golf-Induced Hyperextension

Torrance Wang, MD; Neel Patel, DO; Jordan Wickstrom, PhD; Sarah Eby, MD

ABBEL Research Division, Sinai Rehabilitation Center, Sinai Hospital of Baltimore, Baltimore, MD



History

❖ 81-year-old male with hypertension, hyperlipidemia, and myocardial infarction presented to the emergency department with acute onset:

Bilateral leg weakness

Urinary incontinence

Loss of rectal tone

❖ Symptoms began shortly after hitting golf balls for 2 hours at the driving range.



Differential Diagnosis

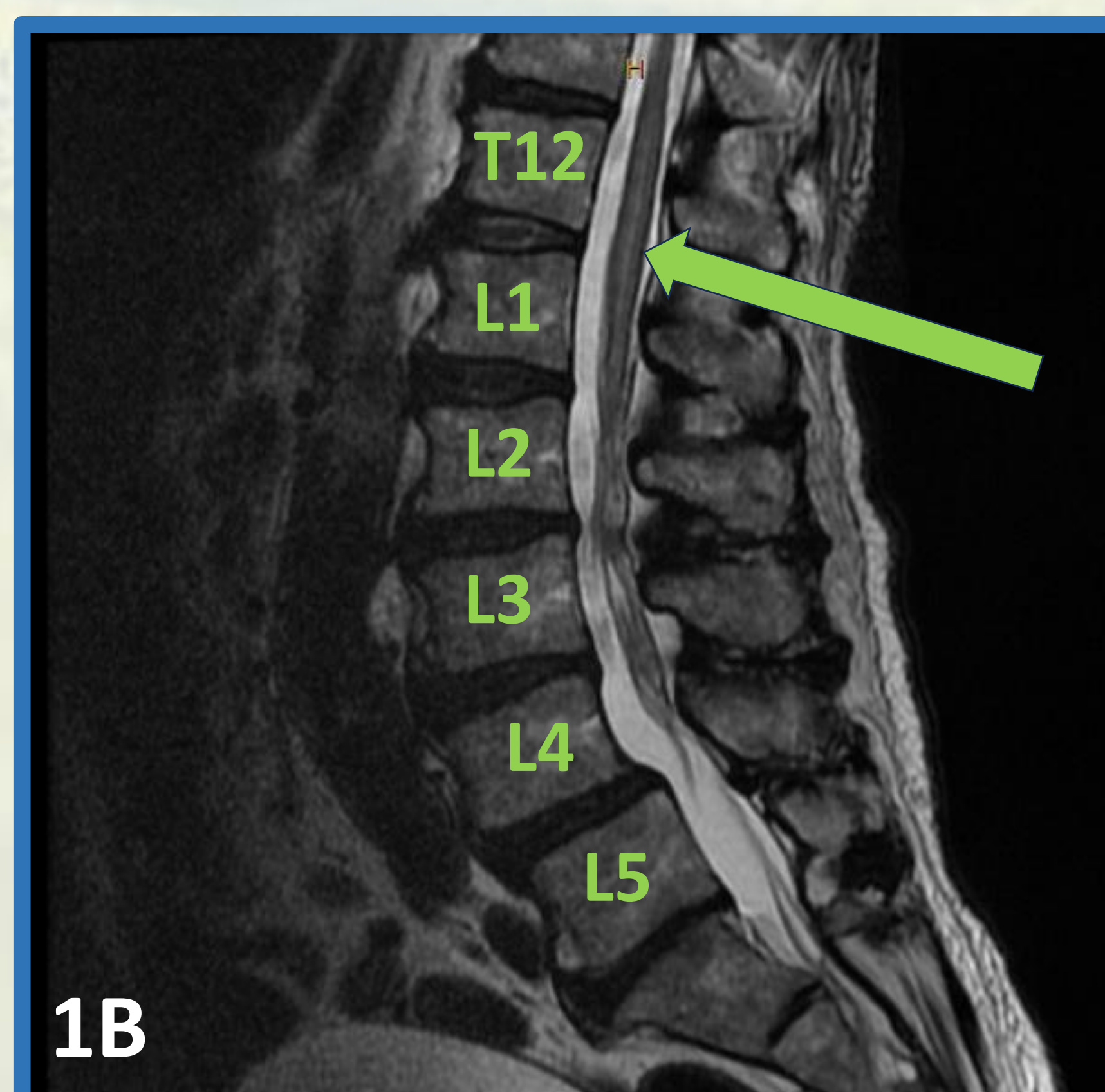
1 "Surfer's myelopathy"

2 Inflammatory process

3 Aortic atherosclerosis

4 Fibrocartilaginous embolism

Work-Up and Treatment



Work-Up

- ❖ CT angiogram was negative for acute arterial occlusion.
- ❖ Complete spine MRI revealed cord expansion with central T2 hyperintensity at T12 and L1 without enhancement, consistent with spinal cord infarct.

Treatment & Outcome

- ❖ Patient received steroids for possible inflammatory etiology without improvement.
- ❖ He was admitted with PM&R consultation and was eventually discharged to an acute rehabilitation facility.

Figure 1A: T2-weighted MRI thoracic spine.

Figure 1B: T2-weighted MRI lumbar spine.

Final Diagnosis

- ❖ T12 AIS C spinal cord injury.
- ❖ The cause of spinal cord infarct was not definitive, but the onset of symptoms following repetitive golf swing made "surfer's myelopathy" (hyperextension-induced ischemia) probable.

Discussion

- ❖ Surfer's myelopathy is a rare, non-traumatic spinal cord injury associated with hyperextension of the back.¹
- ❖ Its name originates from cases in which young, novice surfers experience back pain followed by progressive neurological deficits.¹



- ❖ Over 60 cases have been published with this condition occurring after activities such as surfing, gymnastics, swimming, and cheerleading,¹ but only one case of reported myelopathy occurred due to spinal cord infarction after golfing.²

Conclusions

- ❖ Compared to a previously published case report describing symptom onset 10 days after golfing, this case unique demonstrates the strong temporal relationship between golfing and symptom onset 2 hours later.
- ❖ This case is intended to increase awareness of the various types of activities (beyond surfing alone) that can lead to hyperextension-associated injury.

- ❖ Spinal cord infarct should be considered as part of the differential when hyperextension is the possible mechanism of injury.

References

